What Doesn't Kill Me…: Adversity-Related Experiences are Vital in the Development of Superior Olympic Performance

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Abstract

Objectives: Recent research suggests that experiencing some adversity can have beneficial outcomes for human growth and development. The purpose of this paper was to explore the adversities that the world's best athletes encounter and the perceived role that these experiences play in their psychological and performance development.

Design: A qualitative design was employed because detailed information of rich quality was required to better understand adversity-related experiences in the world's best athletes.

Method: Semi-structured interviews were conducted with 10 Olympic gold medalists from a variety of sports. Inductive thematic analysis was used to analyze the data.

Results: The findings indicate that the participants encountered a range of sport- and non-sport adversities that they considered were essential for winning their gold medals, including repeated non-selection, significant sporting failure, serious injury, political unrest, and the death of a family member. The participants described the role that these experiences played in their psychological and performance development, specifically focusing on their resultant trauma, motivation, and learning.

Conclusions: Adversity-related experiences were deemed to be vital in the psychological and performance development of Olympic champions. In the future, researchers should conduct more in-depth comparative studies of Olympic athletes' adversity- and growth-related experiences, and draw on existing and alternative theoretical explanations of the growth-performance relationship. For professional practitioners, adversity-related experiences offer potential developmental opportunities if they are carefully and purposely harnessed.

Keywords: elite, excellence, growth, sport, stress inoculation

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Introduction

The ability to positively adapt to adversity is of central importance for optimal sport performance[1,2]. Positive adaptation has typically been investigated in the context of negative life events[3], and traditionally there has been a tendency to assume that such adversities impede growth and development[4]. However, Seery[5] argued that people with a history of some lifetime adversity report better mental health and well-being than those with no history of adversity. Specifically, some lifetime adversity predicted relatively lower global distress, lower self-rated functional impairment, fewer posttraumatic stress symptoms, and higher life satisfaction over time[6]. Seery suggested that facing difficulties in one's life may contribute to a greater subsequent propensity for positive adaptation via a variety of potential mechanisms including creating a sense of mastery over past adversity, fostering perceived control and belief in managing successfully, and establishing effective social support networks. Hence, this work indicates that, in moderation, the experience of some adversity can have beneficial outcomes[5].

Across the psychology literature various terms have been used to describe the positive changes that can result from adverse experiences including perceived benefits[7], stress-related growth[8], posttraumatic growth (PTG)[9], thriving[10], positive adaptation[11], and adversarial growth[12]. One of the most popular areas of inquiry is the topic of PTG where researchers have formulated a number of theoretical models[13,14]. According to Tedeschi and Calhourn[13,15], the process of PTG is initiated by the occurrence of a major life crisis that severely challenges an individual's understanding of the world and his or her place in it. Subsequently, the individual strives to rebuild his or her views of the world and of the future using strategies such as cognitive processing, self-disclosure, social support, and schema change. These strategies together with the sociocultural context of the growth process influence the development of PTG in five main domains: appreciation of life, relationships, personal strength, recognition of new possibilities, and spirituality.

Adversity-related growth has only begun to be recognized and explicitly researched in a sport context over the past few years[16-18]. In their opinion article, Collins and MacNamara[19] speculated that

"talent needs trauma" (p. 907) and argued that experiencing a variety of challenges during an athletic career can facilitate high-level performance. Research findings have revealed that sport performers' attempts to work through negative events can lead them to perceive growth in the form of a new life philosophy, self-changes, and interpersonal changes[16], and that performers' experiences of adversity can initiate a process of questioning their identities and searching for meaning in their experiences[17]. In their study of Olympic champions, Fletcher and Sarkar[1] reported that experiencing adversity was important in the development of optimal sport performance:

> Exposure to stressors was an essential feature of the stress-resilience-performance relationship in Olympic champions. Indeed, most of the participants argued that if they had not experienced certain types of stressors at specific times, including highly demanding adversities . . . they would not have won their gold medals. (p. 672)

Despite these observations and the recognition that experiencing adversity can have beneficial outcomes for human growth, little is known about the adversities that the world's best athletes encounter and the perceived role that these experiences play in their psychological and performance development. We investigated these issues by conducting follow-up interviews with a subsample of the Olympic champions who originally participated in Fletcher and Sarkar's[1] study.

Method

The sample comprised of 10 Olympic champions (6 male and 4 female) who had collectively won 11 Olympic gold medals spanning four decades. The age of the participants ranged from 33 to 70 years (M = 47.60, SD = 12.06) and a range of individual and team sports were represented: athletics, curling, cycling, field hockey, figure skating, modern pentathlon, rowing, and sailing. The participants represented four countries: five were from England, two were from Scotland, two were from Ireland, and one was from New Zealand.

Following institutional ethical approval, the 12 participants of Fletcher and Sarkar's [1] study were contacted by email and invited to participate in a follow-up interview. The 10 Olympic champions who were willing to be interviewed were re-contacted to arrange a mutually convenient time and location to meet. All of the participants provided informed consent prior to the start of data collection. Face-to-face interviews were conducted and a semi-structured interview guide was

developed to facilitate discussions about participants' adversity-related experiences that occurred during their development and prior to their gold medal victory. All of the interviews involved asking open-ended questions, such as "can you describe to me any significant events during your sporting career?" and "could you describe the effect this situation had on you as an athlete?" Although the participants were guided through an identical set of questions, the order of questioning varied with the flow of the conversation depending on the direction taken by the participant. This procedural flexibility enhanced the fluency of the interview and richness of the information gleaned, while still retaining the systematic nature of data collection between the participants. The interviews lasted between 34 and 47 minutes, and the audio recordings were transcribed verbatim, yielding 110 pages of single spaced text.

The transcripts were analyzed using the inductive thematic analysis procedures outlined by Braun and Clarke[20]. First, to become familiar with the data, the transcripts were read and reread, and brief notes were recorded to create some preliminary ideas for the next phase of the analysis. Second, codes of interest were generated by extracting and collating pertinent excerpts of the data. Third, all of the codes were organized into potential themes that reflected the content and meaning of the data. Fourth, the themes were reviewed and refined in relation to the generated codes and the entire data set. Fifth, the themes were labeled and defined by attempting to capture the essence of the data it contained. Sixth, compelling extracts were selected to relate the analysis back to the research question. To establish methodological rigor, a number of practices were employed and these were similar to those adopted by Fletcher and Sarkar[1]. Specifically, this involved using a distinctive sample, employing appropriate data collection and analysis procedures, writing a field log and self-reflective memos throughout the research process about potential subjective biases, and using rich quotations from the participants in the hope of allowing complex experiences to vividly emerge[21].

Results

The results derived from the data collection and analysis procedures represent the collated interview responses from all of the participants pertaining to their adversity-related experiences. The Olympic champions encountered a range of adversities that they considered were essential for winning their gold medals, including repeated non-selection, significant sporting failure, serious

injury, political unrest, and the death of a family member. The participants described the role that these experiences played in their psychological and performance development, specifically focusing on their resultant trauma, motivation, and learning. Drawing directly from the experiences of the participants, these incidents and aspects of growth are described forthwith.

The most common sporting adversity identified by the participants was repeated non-selection. The Olympic gold medalists recalled how continually failing to be selected for international competitions initially led to intense feelings of frustration, but subsequently fostered greater effort and desire, as the following quote illustrates:

> I went to trials for the senior team in 1980, 1981, 1982, and 1983 and missed out every time . . . I can remember being pretty furious missing out one or two times when I thought I deserved to be in . . . But when I did get the opportunity, I was elevated into the [rowing] crew that had huge potential [and] I tried my best. That's all you can do really. You just work hard . . . There was probably a hell of pressure there, but it was my first time I'd been in a crew like this . . . so everything was just an opportunity to be taken. If something wasn't right, you'd work hard and listen . . . these guys had won world titles so it was my job to listen and to learn.

The majority of the participants had encountered at least one significant perceived sporting failure during their athletic career before their gold medal victory. Examples of this sporting failure included disappointment in a major championship, underperformance at a previous Olympic Games, or losing in an early round in an Olympics that they ultimately succeeded in. One participant described her team's highly focused reflection and increased effort after failing at a major championship just a couple of months prior to winning gold:

> The European Championships [were the] test run for the Olympics . . . and it was a disaster, but it was a good thing it was a disaster. Because there were team harmony issues that had to be sorted. We had to take a long hard look [at ourselves and] . . . we were disappointed that we didn't perform, but that was a massive learning curve. It was the kick up the backside [that we needed] . . . so it made us work that extra bit harder over the next two months.

Failing at a previous Olympic Games provided the most emotive extracts regarding adversity-

related experiences in sport. Interestingly, the majority of participants stated that if they had not underperformed at a previous Olympics, they would have not won their gold medal. The following quote provides an example of a participant's intense negative emotions after some distressing performances at a previous Olympics and how this initiated learning:

> In Athens . . . we finished . . . somewhere like eighth. It was pretty disappointing. In the next round . . . we beat the old world record but [the opponents] set a new world record . . . so they knocked us out. We pulled ourselves together and then went up to the [next event]. In the semi-final I finished second or third [and] made the cut to the final. But then after the race [the referee] disqualified me for doing an illegal move which everyone says I was robbed. I was absolutely gutted and literally left the Olympic village that day . . . Instead of looking at the big picture, I let things get to me. I had a horrible experience . . . and that's why I didn't ride a bike for six months. [But] if I hadn't have failed in Athens, I wouldn't have succeeded in Beijing . . . It takes losses like that sometimes, even though they're hard to swallow, hard to deal with. It will benefit you later on in life. I just learned . . . not to get so hyped up or worried about stuff.

Other significant sporting losses occurred during the Olympics where the participants became champions. In the following quote, the athlete discusses how he and his teammates responded to, and learnt from, their failure in the opening round of the Olympics where they then went on to win a gold medal:

> We lost that first round [at the Olympics] . . . and we had to do the repêchage [a race that allows competitors who have lost in a previous round another chance to qualify]. That was really important. I think if we hadn't lost that I don't think we would have won the final. There was no aggression [in the first round and we] were furious. It was a three day wait before the repêchage . . . [and we were] getting more and more angry and annoyed and we were kicking ourselves. [But] some guys in the crew thought that [we raced the repêchage] better than our final. We just learnt to race properly in that repêchage. We learnt to race with lots of passion.

Some of the participants experienced a serious injury during their preparation for the

Olympics. In many cases, their ambition to fulfill their athletic potential helped them to overcome this negative incident as the following quote highlights:

> I had a major injury . . . the year before the Olympics, tearing the hamstring off the bone at the back of the pelvis, which could probably have put me out if it hadn't been for my determination to get back. . . I don't think I was the most gifted [athlete] but I just hung in longer. And it's that level of willingness to push yourself and see how much you can get out of yourself, which I think was one of the key factors [to winning gold].

Two adversities identified by Olympic champions were related to non-sporting situations. For example, some of the older gold medalists were exposed to political unrest and terrorism during their athletic careers, and they felt that these negative circumstances were important in igniting their motivation to perform at the highest level:

> Very often . . . I'd be travelling into [name of town] and bombs would be going off as I was actually progressing into the town centre. And that was . . . very scary because you could see the plumes of smoke going up as you were going into the city on the bus. But you . . . just had to do it. You had to be determined that it was important to get your training session in . . . I just single-mindedly wanted to achieve my dream despite what was happening . . . I wanted to please [people], and particularly because we were going through such dreadful times . . . I wanted to bring some good news back.

The second adversity outside of sport, identified by participants, was the death of a close family member. Some of the gold medalists described how this major life event was a motivating factor for their subsequent sport participation, as the following quote highlights:

> [Mum sadly] died within six months of them identifying the fact that she had cancer. That was an absolutely traumatic loss . . . And then to have a new woman come into our lives . . . and live with us very soon after my mother's death . . . There was a lot of anger. There was hurt. There was disappointment. My escape was to get out and do sport . . . I wanted to achieve for my mum's sake. I wanted to prove to her that I was good and that she had created this daughter who was an achiever.

Discussion

Adversity-related experiences were deemed to be vital in the psychological and performance development of Olympic champions. The findings provide support for the concept of growth following adversity in elite sport. The adversities identified by the participants initially led to trauma with the champions recalling that they were 'furious', 'absolutely gutted', and 'angry'. However, rather than eliciting prolonged maladaptive behavioral responses, these extremely intense negative emotions appear to have fueled the champions' subsequent effort and application. Tedeschi and Calhourn[13,15] asserted that some degree of emotional distress is necessary for growth to occur, especially when accompanied by constructive cognitive processing. In the present study, the process of negative emotions stimulating growth, in the form of increased exertion and execution, may begin with athletes concentrating on *why* they were experiencing those (distressing) emotions rather than focusing on *what* they were feeling[22]. At the time of the trauma, the participants also appear to have adopted a self-distanced psychological vantage point rather than a self-immersed perspective. The combination of these two psychological mechanisms – a "why" focus on emotions from a self-distanced viewpoint – served to attenuate emotional reactivity by directing the individual's attention to a less concrete and more abstract analysis of his or her experience. Both of these mental processes enabled a 'cool', reflective processing of negative emotions whereby individuals could make sense of their experience without reactivating excessive 'hot' negative affect[23].

Adversity and the resultant trauma served to ignite the Olympic champions' desire to excel at the highest level, for both personal and others' gain. Some athletes, for example, reported aspirations to 'please people' and to 'achieve for my mum's sake'. These quotes illustrate the ability of Olympic gold medalists to exploit adversities to fuel their ambition. Adversity-related experiences may also have shaped the athletes' motivation through an alternative "darker" explanation. After encountering adversity, some champions reported feelings of wrongdoing, and they described how this sense of injustice drove them on in their performance development. These feelings of wrongdoing and injustice seem to reflect the process of spatial-symbolic engulfment motivation or the marking of one's psychological territory via acquisition[24]. Spatial-symbolic engulfment refers to a "dark side" of core psychological processes; a side that not only spurs growth and development but also self-serving indifference and disturbing malevolence[25]. In the context of elite sport, this extreme form of

motivation may be characterized by the creation of a single-minded, narcissistic desire to prove one's worth via the achievement of Olympic success. Indeed, the findings suggest that trauma stemming from adversity can leave an indelible impression on an individual's psyche and schema, to the extent that his or her raison d'être is established or altered, and the demonstration of high achievement and superiority become fundamental psychological exigencies for that individual. This explanation resonates with Tedeschi and Calhourn's[13,15] model of PTG in which they propose that trauma may require individuals to reconfigure shattered belief systems. This destruction of fundamental schemas can lead individuals to revise their life narratives with the trauma acting as a catalyst or turning point for an alternative life story[13,15].

After the trauma and the ignition of motivation, the experience of adversity seems to have stimulated learning and increased confidence for subsequent challenging situations[2]. More specifically, the knowledge that the champions' accumulated from negative events appears to mobilize previously untapped resources and create a sense of mastery for future adversities[5,6]. The champions who engaged in purposeful reflection seemed to accelerate their learning[26], since the reflective process offers a means of generating self-awareness, formulating new knowledge and, in some cases, empowering individuals to implement change in their performance-related practices[27]. Valuing the learning that has occurred in the aftermath of trauma and reflecting on how it creates new pathways and opportunities is an important aspect of the growth process[13,15]. To illustrate, Roepke and Seligman[28] recently found that engaging with new possibilities – seeing new doors opening in the wake of adversity – was a powerful predictor of growth. This finding provides theoretical support for the emerging science of prospection, which proposes that humans are drawn by the future rather than solely driven by the past[29]. Thus, it may be that "to grow, people . . . need adversity in the past and possibility in the future" (p. 7)[28].

The current findings have a number of applied implications for practitioners and coaches working in elite sport. It is important to encourage athletes to actively engage with challenging situations that present opportunities for them to raise their performance level[26] and, in doing so, expose athletes to appropriate and progressively demanding stressors. Drawing from theories of stress inoculation[30], it has been suggested that exposure to adversity in moderation can help individuals to

develop resilience in the face of future pressure situations[5,6]. A possible approach for directly generating challenge could be systematic exposure to realistic critical incident simulations[31]. Regular pressure training and testing may provide an opportunity for performers to deal with the challenge of evaluation and judgment in a controllable and supportive environment. Furthermore, setbacks and failures that are encountered on the pathway to sporting excellence could be used as a focus for learning, reflection, and praxis. For example, in an elite team sport context, Morgan et al.[2] suggested holding small group meetings to reflect on the benefits of experiencing adversity and to discover whether there are novel strengths to be gained. In terms of facilitating growth, practitioners and coaches may find it useful to draw on elements of the PTG enhancement strategy designed for soldiers in the U.S. Army[32]. These include: understanding the trauma response as a precursor to PTG, emotional regulation enhancement, constructive self-disclosure, creating a trauma narrative with PTG domains, and developing life principles that are robust to challenges. As a caveat to these applied suggestions, practitioners and coaches must ensure that such initiatives are tailored to an individual's psychosocial development and are suitably debriefed to fully realize their benefits[19].

The findings of our research suggest that adversity-related growth has the potential to be an interesting and informative area of future inquiry. To add to our studies of superior Olympic performance, an important issue for consideration is the temporal course of growth in a variety of Olympic athletes. More specifically, by employing a multi-method approach, researchers could compare in more depth the developmental journeys of serial gold medalists, one-off gold medal winners, finalists, and those who underperformed, to better understand differences in their respective adversity-related experiences and growth trajectories. When conducting future work in this area, researchers should ensure that they draw on the most recent growth models such as Joseph et al.'s[14] affective-cognitive processing model of PTG. Furthermore, researchers may also wish to explore other possible mechanisms of the growth-performance relationship such as the process of disengaging from a particular goal to re-engaging with an alternative goal[33], the support and satisfaction of psychological needs[34], the development of a survival mindset[35], and exposure to punishment-conditioned stimuli[36]. Finally, researchers should explore if psychometric assessments and screening can be used to ascertain whether aspiring athletes possess a propensity for adversity-related growth.

Conclusion

The gold medalists interviewed in this study believed that adversity-related experiences were essential for their Olympic success. These traumatic experiences appear to have positively influenced athletes' subsequent performance in sport by igniting motivation and stimulating learning. In the future, researchers should conduct more in-depth comparative studies of Olympic athletes' adversity- and growth-related experiences, and draw on existing and alternative theoretical explanations of the growth-performance relationship. For professional practitioners, adversity-related experiences offer potential developmental opportunities if they are carefully and purposely harnessed[31].

Practical Implications

- It is important to encourage athletes to actively engage with challenging situations that present opportunities for them to raise their performance level and, in doing so, expose athletes to appropriate and progressively demanding stressors.
- Regular pressure training and testing may provide an opportunity for performers to deal with the challenge of evaluation and judgment in a controllable and supportive environment.
- Setbacks and failures that are encountered on the pathway to sporting excellence could be used as a focus for learning, reflection, and praxis.
- Elements of the PTG enhancement strategy for soldiers in the U.S. Army[32] may be a useful evidence-based framework to facilitate growth.
- Practitioners must ensure that such initiatives are tailored to an individual's psychosocial development and are suitably debriefed to fully realize their benefits.

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